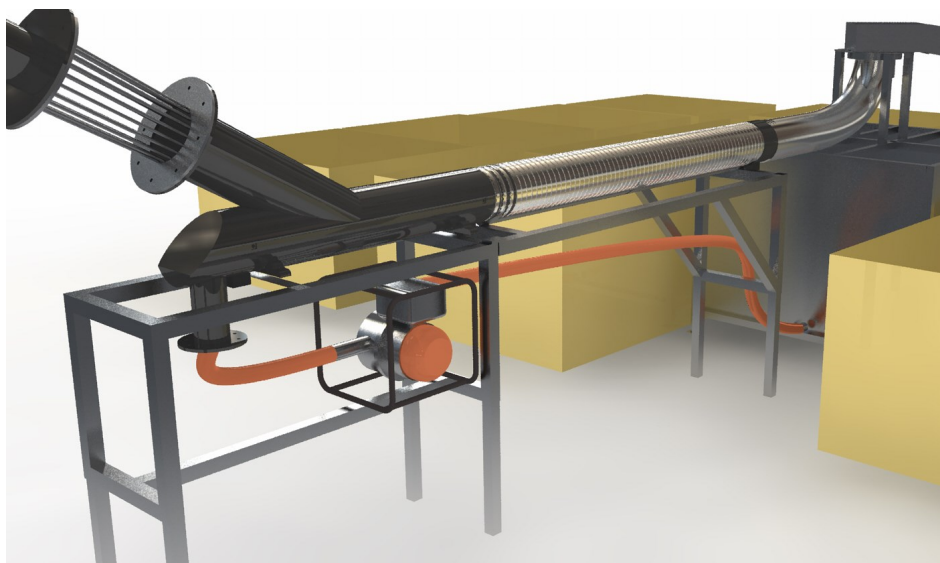


HS2



Volklingen Seabass and Bream USER MANUAL 1.0

Issued 23 - 4 - 2014



**PLEASE TAKE TIME TO READ THIS USER GUIDE
BEFORE INSTALLING YOUR ELECTRIC STUNNER**

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1. BEFORE YOU START

1.1. Book an Installation



Ace Aquatec have distributors and agents around the world. A scientist or local engineer can be booked to assist with the installation or calibration of your machine. Please see 1.2.

1.2. Contact Information

For advice or technical assistance contact Ace Aquatec:

EMAIL: sales@aceaquatec.com

For returns, repairs, calibration please email Ace Aquatec and request details of your local servicing contractor.

Ace Aquatec is a Scottish Company registered at Companies House under SC335694 at:

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1.3. About this Guide: Colour Code

Text in **green** is **ADVISORY**.

Text in **red** indicates **MANDATORY**. If unheeded, may result in sub-optimal performance or **DAMAGE**.



1.4. Equipment Warning

Never connect **ANY** part of a **HS2 or HSU** Ace Aquatec stunner to any part of a **1st generation** system.

SEVERE DAMAGE will result and neither unit will function without repair.



1.5. REGULATIONS

This is a humane stunner to render fish unconscious within one second of their touching the electrified water. It meets all EU requirements for humane slaughter.



2. OPERATION

2.1. PRE START CHECKS

1. Ensure that the water drain on the tank is closed and flow check valve is open. (Fig 1 "A")



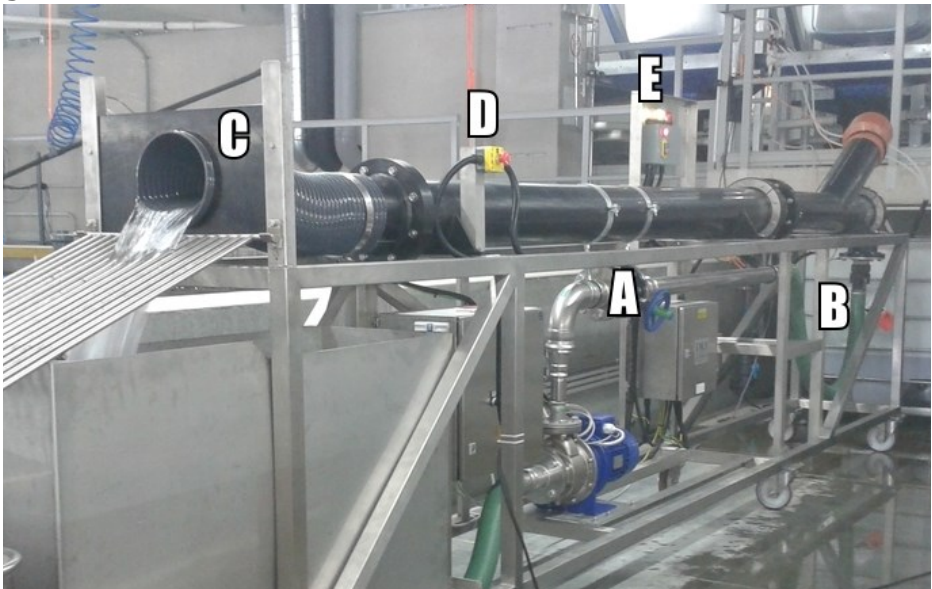
2. Release green hose from stun tube, ensure it is empty of water and reconnect it. (Fig 1 "B")

3. Ensure that the flexible end of the stun tube is in the raised position. (Fig 1 "C")



4. Ensure that both single phase and three phase power is connected.

Figure 1. Overview of the Stunner



2.2. START-UP PROCEDURE

1. Fill water tank 2/3 full with fresh water and add one bucket of sea water.

Do not start the water pump yet



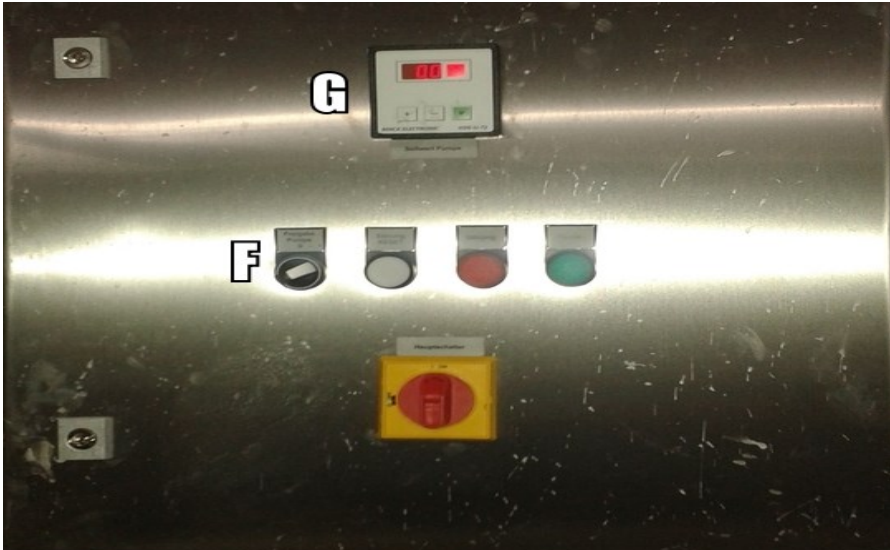
2. Twist the stunner emergency stop (red mushroom button) to release it and press the green "on" button. (Fig 1 "D" and "E")



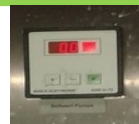
The green light will show for about 30 seconds before changing to amber.

3. Start the water pump and check the speed is set to 50 (Fig 2 "F" and "G")

Figure 2. The Pump Controller Cabinet

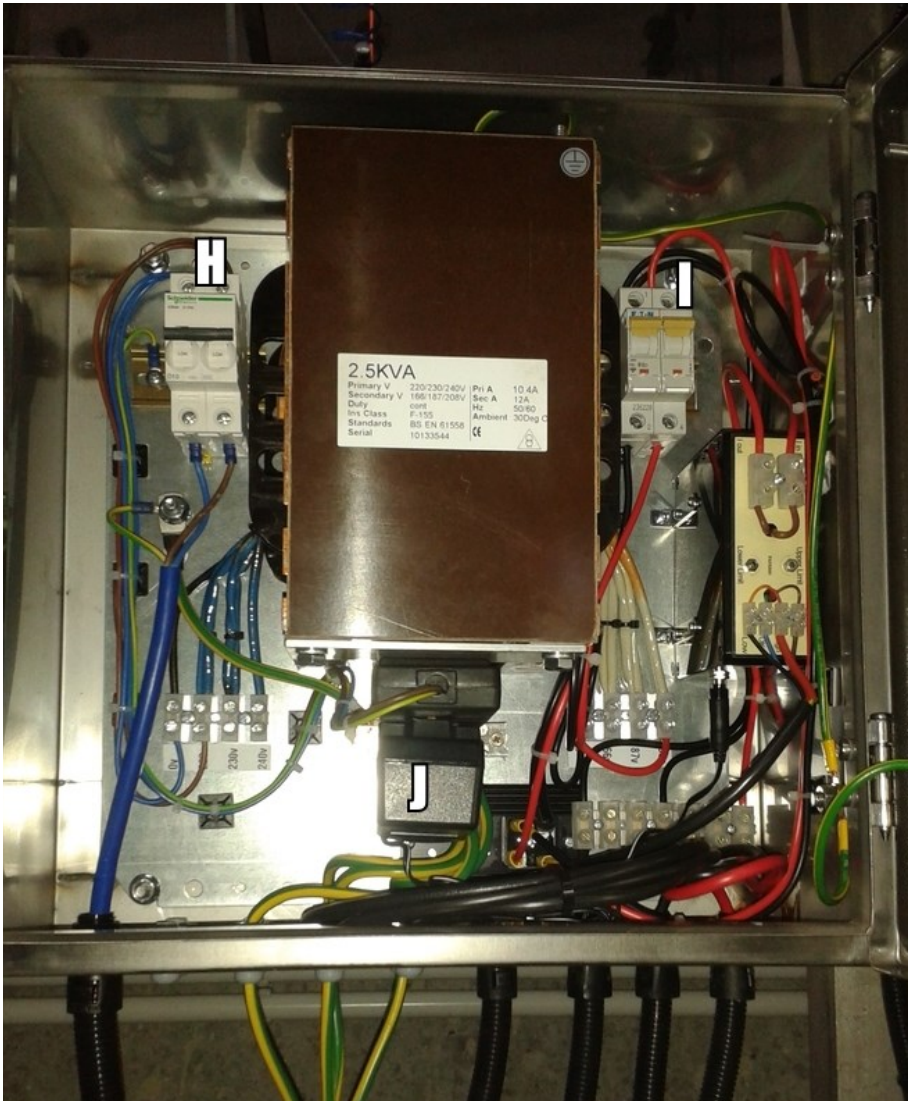


4. If the amber light does not change to green within a few seconds then add a second bucket of sea water.



5. If the light remains amber then check the circuit breakers in the stunner cabinet. (Fig 3 "H" and "I")

Figure 3. Inside the stun cabinet



Beware! Live Electricity! Ensure the machine is off before handling wiring.

2.3. STUNNING

6. If the green light is showing and the pump is running then the system is ready to for use.



7. If the **red light starts** to show then the water is becoming too salty and the circuit breakers "H" or "I" will soon trip out. **You should stop the harvest within a few minutes and change the water.**

8. At any time during operation the system can be stopped (point 9) and restarted (points 2 & 3)



2.4 Turning off & After Use

9. Switch off the stunner with the **mushroom button** and the **water pump switch**.



10. Empty the water tank, drop the flexible end of the stun tube, disconnect the green hose from the stun tube and wash out the entire machine.

3. ADDITIONAL NOTES

The Amber, Green and Red lights indicate the amount of current flowing in the stun tube.



The Amber light means that the current in the stun tube is too low (i.e. less than 0.5 A). The usual reason for this is that the water conductivity is below 1000 $\mu\text{S}/\text{cm}$ so more salt is needed, alternative causes include:

- There is no water in the tube
- One of the circuit breakers in the stun cabinet has tripped. (Fig 3 "H" and "I")
- The power supply for the sensing circuit has become unplugged. (Fig 3 "J")



The Green light indicates that the stun current is within normal operating limits.



- The Red light means that the current in the stun tube is too high (i.e. greater than 10 A). This is likely to be because the water in the tank has become too salty.



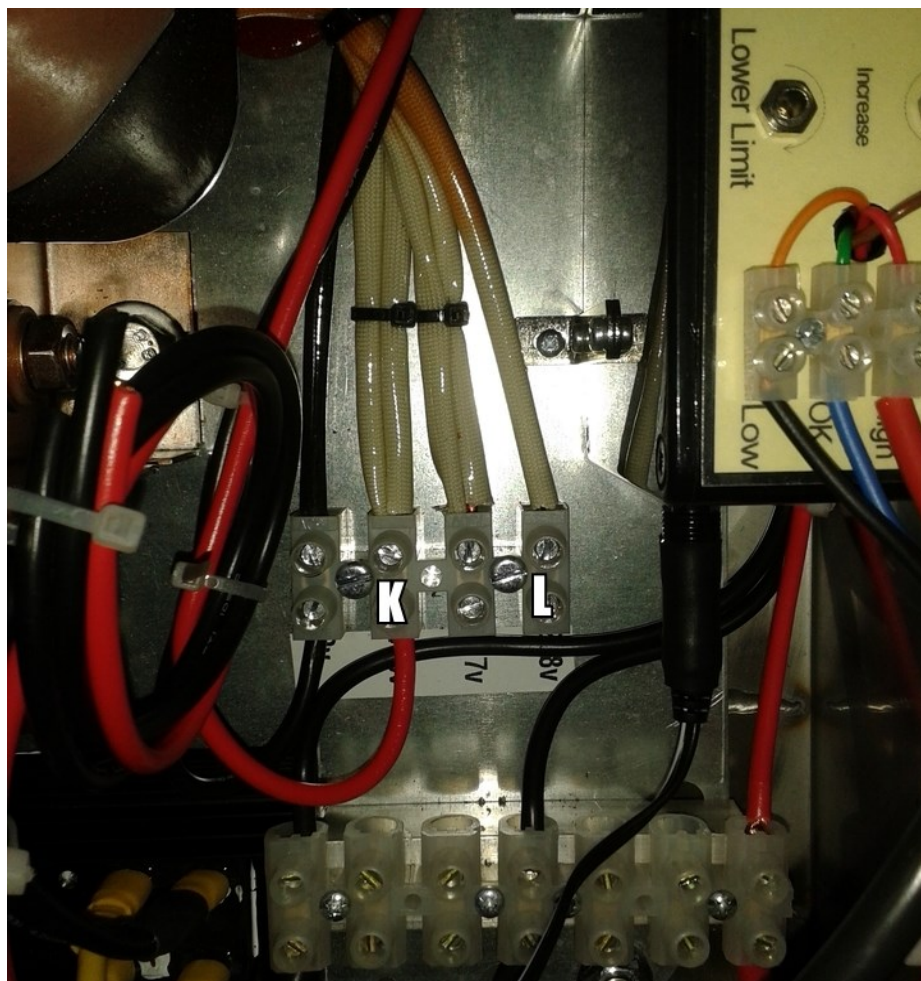
If none of the lights show then the single phase power is probably not available.

- Check that the mushroom emergency stop button is released.
- Check if the farm power supply circuit breaker needs to be reset.
- Check the circuit breakers "H" and "I" in the stun cabinet.

The reason for starting the stun electronics while the tube is empty of water is to reduce the short start- up current spike which can trip the circuit breakers in the farm or in the stunner cabinet.



Figure 4. Detail Inside the Stun Cabinet



4. STUN

MODIFICATION



The stunner was commissioned and tested with the wiring as shown in Figure 4 and the pump set to run at speed "50" with the water.

Under these circumstances the equipment delivers an electric field of 1.1 V/cm and the fish remain in the stun tube for about 12 seconds.

The depth and duration of insensibility can be increased if necessary by extending the duration that the fish remain in the stun tube to about 25 seconds and by increasing the electric field to 1.3 V/cm. This is achieved by reducing the pump speed to 37 and by moving the red wire from position K to position L (Fig 4).

(This altered wire position is shown in Figure 3)

5. Maintenance & Care

IMPORTANT!

Wash down after use!

- hose out the tubes
- wipe the black stun tube using fresh water to stop salt build up.



Keep Packaging!

- Keep original packaging safe in the event the equipment needs transporting for repair



Monitor Fish Quality!

- Keep accurate records of fish quality and update Ace Aquatec if you believe any settings need adjusting.

USER GUIDE

1.0

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